

APR 20 1993

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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ET Docket No.  
92-298

APR 20 1993

In the matter of:

Notice of proposed rule making to  
Amend the Commissions's Rules  
to Establish a Single AM  
Stereophonic Transmitting  
Standard

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY  
Reply Comments of  
John E. Morris

John E. Morris is a broadcast engineer who has been employed in radio broadcasting since 1961. He has no financial interest in any of the proposed AM Stereo systems. The comments herein are his own, and not necessarily those of his employer.

Comments in reply to the comments of Leonard Kahn, Hazeltine Corporation, Harris Corp., Motorola, Inc., Capital Cities/ABC and the National Association of Broadcasters:

1. As in all matters before the Commission, this decision must be based entirely on serving the greater public interest. The interests of equipment manufacturers and dealers, as well as those of the broadcast industry should not weigh in the Commission's decision. It cannot be in the public interest for the Commission to mandate any transmission system that degrades signal quality at the listener's receiver.

2. Serious questions have been raised in the comments about the technical merits of the Motorola "C-Quam" AM Stereo system. There is comparative laboratory and field test data available to the Commission that indicates not only the poorer stereo performance of the Motorola system, but that it also degrades reception of the un-decoded stereo transmissions on monophonic receivers.

I have personally observed (without laboratory controls) increased audible distortion on monophonic receivers and adjacent channel "splatter" from stations using "C-Quam" AM Stereo. I have made other observations that "C-Quam" receivers have extremely poor sensitivity and selectivity, and will not receive monophonic signals as strong as 10 mv/m.

I have also observed improved monophonic reception of a station using the Kahn Independent Side-band (ISB) AM Stereo system, under certain sky-wave conditions. The improvement was noted over that of monophonic transmission.

For the Commission to exclusively endorse the Motorola "C-Quam" transmission system without first resolving these questions and without full documentation of it's technical performance relative to both monophonic and Kahn "ISB" transmissions, would be contrary to the public interest.

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3. There were comments that many stations have discontinued the use of Motorola "C-Quam" transmitting equipment. It stands to reason that if a broadcast station has made an investment in equipment that is supposed improve its competitive position, it would keep that equipment operating. There must be a compelling reason for stations to discontinue use of their C-Quam AM Stereo equipment. It would be in the Commission's and the public interest for the Commission to learn the reason why stations with C-Quam equipment are not using it, prior to the Commission's requiring the use of C-Quam for AM Stereo.
4. Several broadcast stations have installed Kahn ISB equipment for the intended purpose of improving their performance on monophonic receivers (there are no ISB stereo receivers readily available in stores). For the Commission to require that those stations discontinue use of the ISB equipment, thereby degrading their present signals, would not be in the interest of the people who prefer to listen to those stations.
5. If there were no technical difference between the Motorola and Kahn systems, the Commission's "Marketplace" decision should have made the Motorola system the clear-cut winner. Given the enormous financial superiority of Motorola, General Motors and Harris Corp. over the much smaller Kahn and Hazeltine companies, Motorola's promotional campaign should have the whole Country listening to C-Quam stereo by now.

Even the financial strength of those major corporations could not overcome the technical deficiencies of the Motorola C-Quam Stereo System. Now that these companies realize that their financial clout cannot buy a public mandate for their system, they are using their political clout to push for a regulatory mandate.
6. If the Commission is truly concerned only with the Greater Public Interest, it will reaffirm the "Marketplace" decision. If the Commission were to determine that it must select a single system with no further research, the public interest could only be served by selection of the Kahn ISB system.
7. In the event the Commission should have the wisdom to reaffirm its previous decision, a clear-cut marketplace decision would be forthcoming if the Commission were to also require that all radio receivers that are sold as "Stereo" decode AM as well as FM stereophonic transmissions. (The UHF television band became viable only after the Commission required UHF tuners in all receivers.) The technology exists for a single inexpensive chip to decode both the Motorola and Kahn systems, with automatic switching upon detection of pilot signals. This would also require that both system proponents license their receiver technology to all radio manufacturers at a reasonable fee.

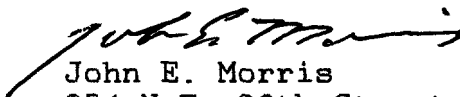
With a preponderance of multi-mode receivers in the hands of the public, the transmission system would be dictated to broadcast stations by feed-back from their listeners. By assuring public access to both systems, and permitting the public to choose its preferred system, the Commission would unquestionably be acting in the greater public interest.

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The Commission would not be acting in the public interest if it were to arbitrarily mandate Motorola AM Stereo on the basis of political pressure, while ignoring evidence that the system may degrade AM transmission and reception capability.

Dated: April 19, 1993

Respectfully Submitted,

  
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